AMENDMENTS TO THE SPECIFICATION:

Please replace the second paragraph, lines 9 to 18, on page 8 with the following amended paragraph:

This invention contemplates the treatment of a fluid feedstock, e.g. various type organic materials, especially a fluid mixture of compounds of petroleum origin. In general, the fluid feedstock is a gaseous mixture comprising a more selectively permeable component and a less permeable component. Advantageously one or more of the module inlet streams may comprises a mixture of liquid and condensable vapor. Optionally, the apparatus may further comprise ~~comprises~~ means for distribution of a "sweep" stream into the permeate chambers, but typically no sweep is required.

Please replace the paragraph at lines 12 to 25, on page 9 with the following amended paragraph:

This invention is particularly useful towards separations involving organic compounds, in particular compounds which are difficult to separate by conventional means such as fractional crystallization. Typically, these include organic compounds that are chemically related as for example a process for the separation and purification of para-xylene from mixed xylenes. Compared to current technologies for para-xylene purification, para-xylene is produced from the membrane process described herein at significantly reduced capital, operating, and energy costs. The invention can also simultaneously meet para-xylene purity requirements and recover more para-xylene than conventional para-xylene purification processes. Having similar boiling points, simple distillation is a cost prohibitive method of purifying para-xylene from C8 aromatics.

Please replace the paragraph at page 9, line 31 to line 4, on page 10 with the following amended paragraph:

The invention is hereinafter described in detail with reference to the accompanying drawing which is a schematic flow diagram depicting aspects of the membrane separation processes and apparatus of the present invention for simultaneous recover of a very pure permeate products ~~product~~ and one or more desired non-permeate product. The drawing depicts an embodiment of the present invention in which a plurality of membrane separation devices is used to modify the composition of a mixture of chemical compounds.

Please replace the paragraph at lines 5 to 26, on page 12 with the following amended paragraph:

Concentration polarization is well controlled in bore-side feed modules. The feed solution passes directly across the active surface of the membrane, and no stagnant dead spaces are produced. This is far from the case in shell-side feed modules in which flow channeling and stagnant areas between fibers, which cause significant concentration polarization problems, are difficult to avoid. Any suspended particulate matter in the feed solution is easily trapped in these stagnant areas, leading to irreversible fouling of the membrane. Baffles to direct the feed flow have been tried, but are not widely used. A more common method of minimizing concentration polarization is to direct the feed flow normal to the direction of the hollow fibers. This produces a cross-flow module with relatively good flow distribution across the fiber surface. Several membrane modules may be connected in series, so high feed solution velocities can be used. A number of variants on this basic design have been described, for example U.S. Patent Numbers 3,536,611 in the name of Fillip et al., 5,169,530 in the name of Sticker et al., 5,352,361 in the name of Prased ~~Parsed~~ et al., and 5,470,469 in the name of Beckman which are incorporated

herein by reference each in its entirety. The greatest single advantage of hollow-fiber modules is the ability to pack a very large membrane area into a single module.

Please replace the paragraph at page 12, line 28 to line 6, on page 13 with the following amended paragraph:

Para-xylene is produced or separated from petroleum and chemical feedstocks as a commodity chemical ultimately used in the production of polyester fiber and resin. When removed from most petroleum-derived feedstocks, para-xylene is found in mixtures with other C8 aromatics; namely: meta-xylene (mX), ortho-xylene (oX), and ethylbenzene (EB). The three xylene isomers have an equilibrium ratio ~~ratios~~ of approximately 1:2:1 for PX:mX:oX, and depending on the source, ethylbenzene can comprise up to about 20 percent by weight of a C8 aromatics mixture leaving a balance typically of from about 80 to about 99 percent by weight of xylene. Beneficially processes of this invention efficiently recovery purified para-xylene from the near equilibrium mixture, and submitting the remainder of the stream to an isomerization reactor to re-establish the equilibrium.

Please replace the paragraph at lines 7 to 22, on page 13 with the following amended paragraph:

Referring to the right side of the drawing, where a membrane device **20** is disposed according to a preferred aspect of the invention. Membrane device **20** comprises a perm-selective membrane that under suitable differential of driving force exhibits a permeability of at least 0.01 Barrer, channels having at least one inlet and one outlet for flow of fluid in contact with one side of a membrane, and contiguous with the opposite side thereof a permeate chamber having at least one outlet for flow of permeate. A mixture of two or more compounds which when subjected to appropriately altered conditions of temperature and/or pressure

embodiment of the present invention, pump **34**, heat exchanger **40**, and/or the enthalpy of a feed mixture are adjusted so that the MEI of the fluid in conduit 52 is within a range from about 0.5 to about 1.5; and heat exchanger **40** and/or the enthalpy of another feed mixture are adjusted so that the MEI of the nonpermeate fluid from membrane module **50** is within a range from about 0.5 to about 1.5.

Please replace the paragraph at lines 16 to 21, on page 17 with the following amended paragraph:

The results in Table I show ~~the~~ that as permeate recovery increased permeate purity decreased. At the same time, more material passed through the membrane and membrane cooling increased as membrane area increased. As membrane cooling